

S03P1324

1/30

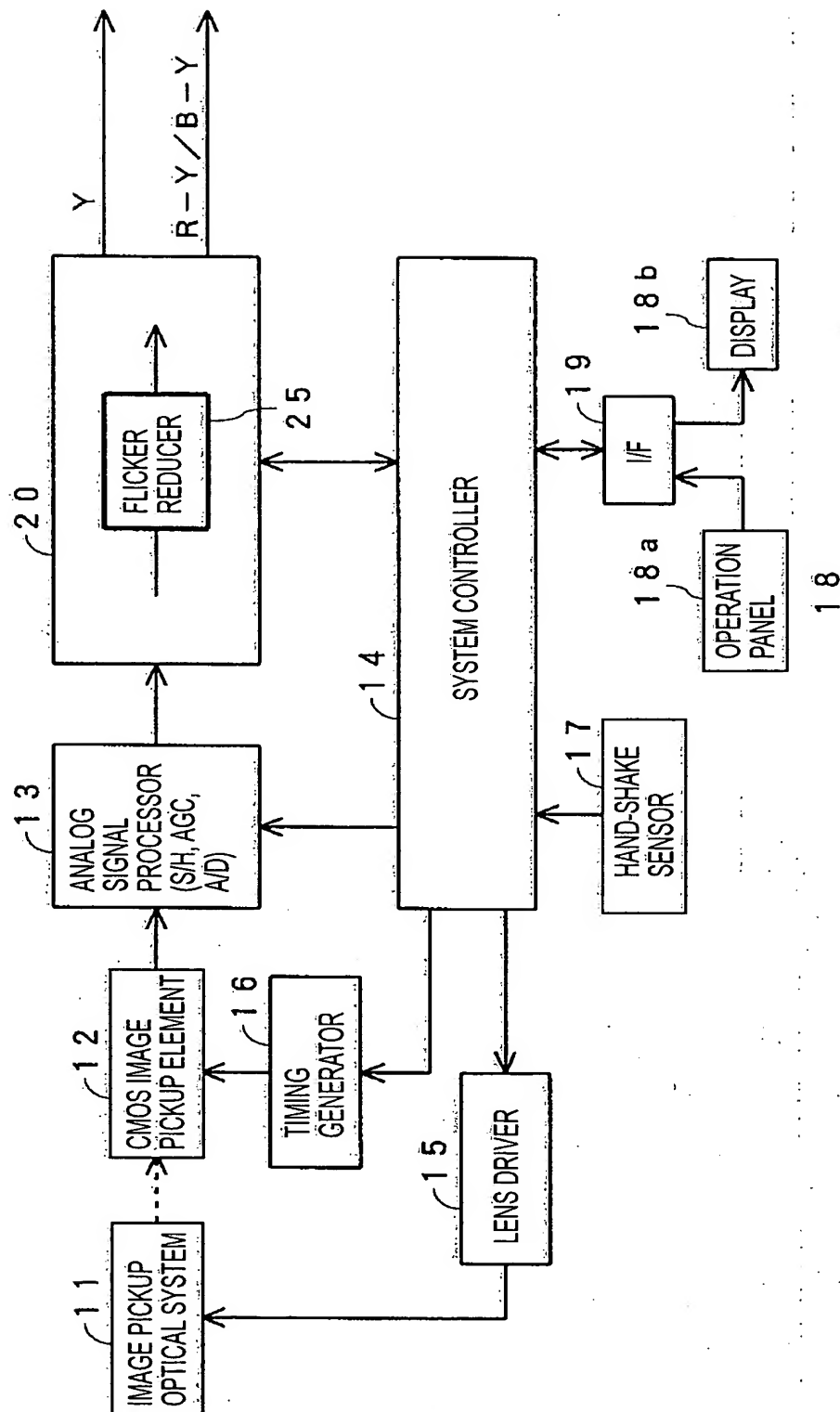


Fig.1

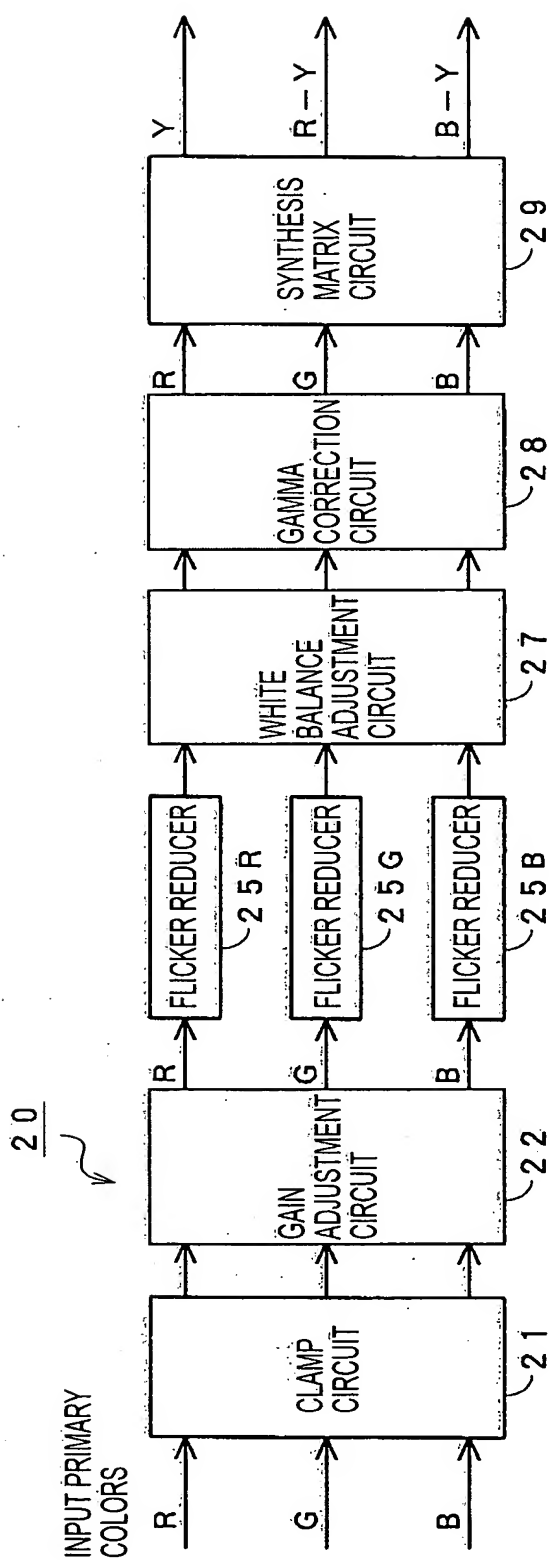


Fig.2

3/30

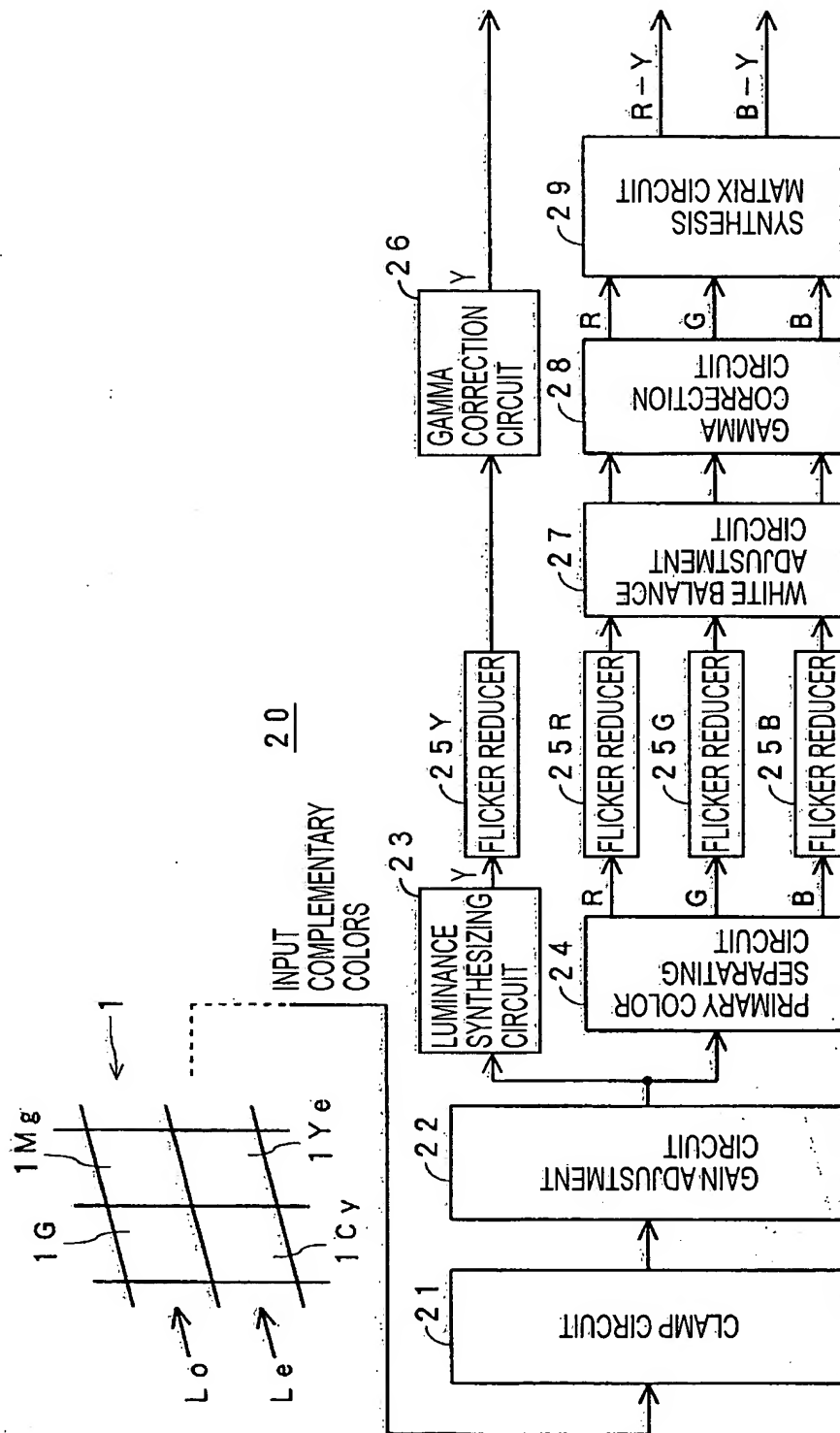


Fig.3

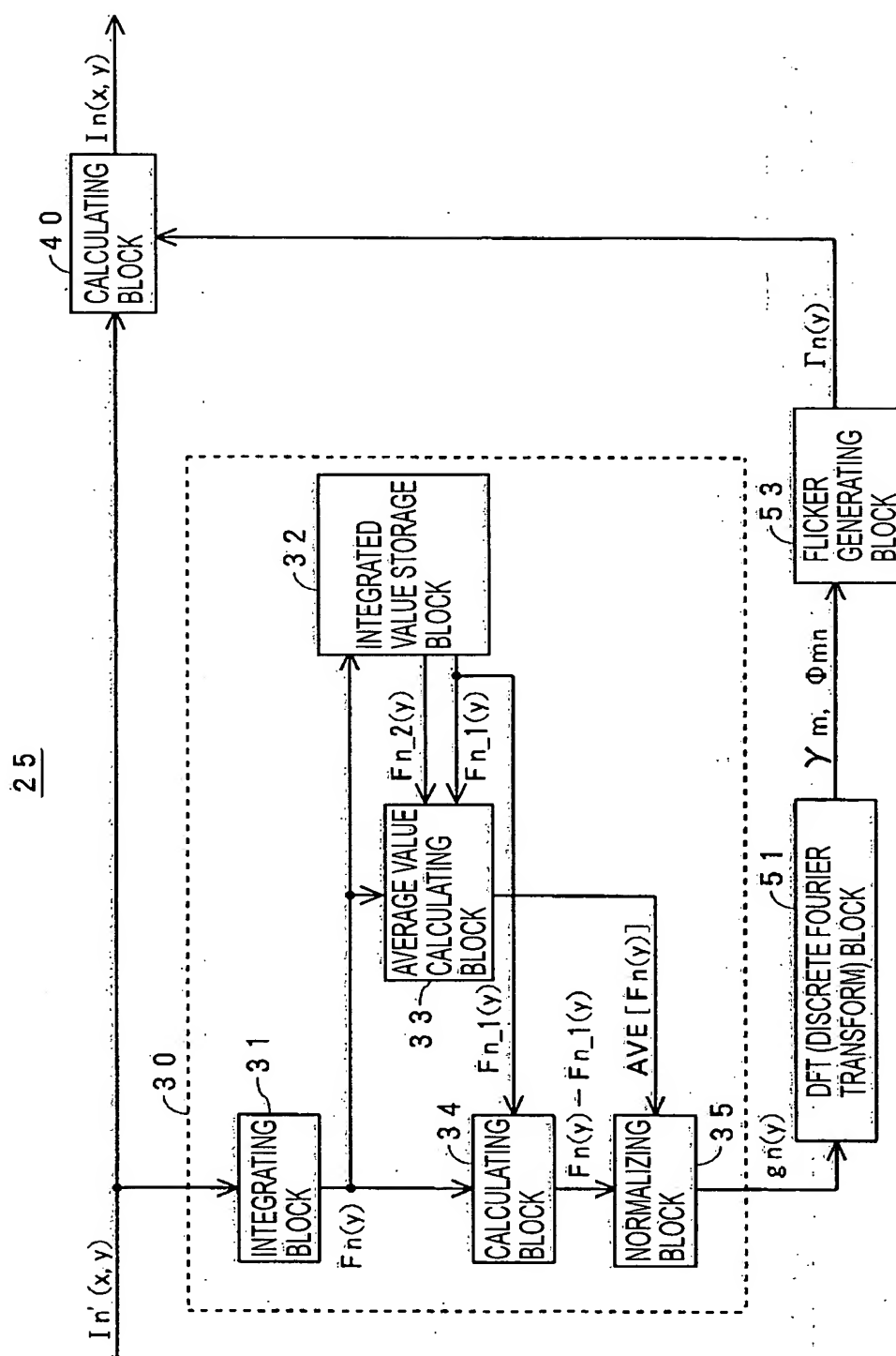


Fig.4

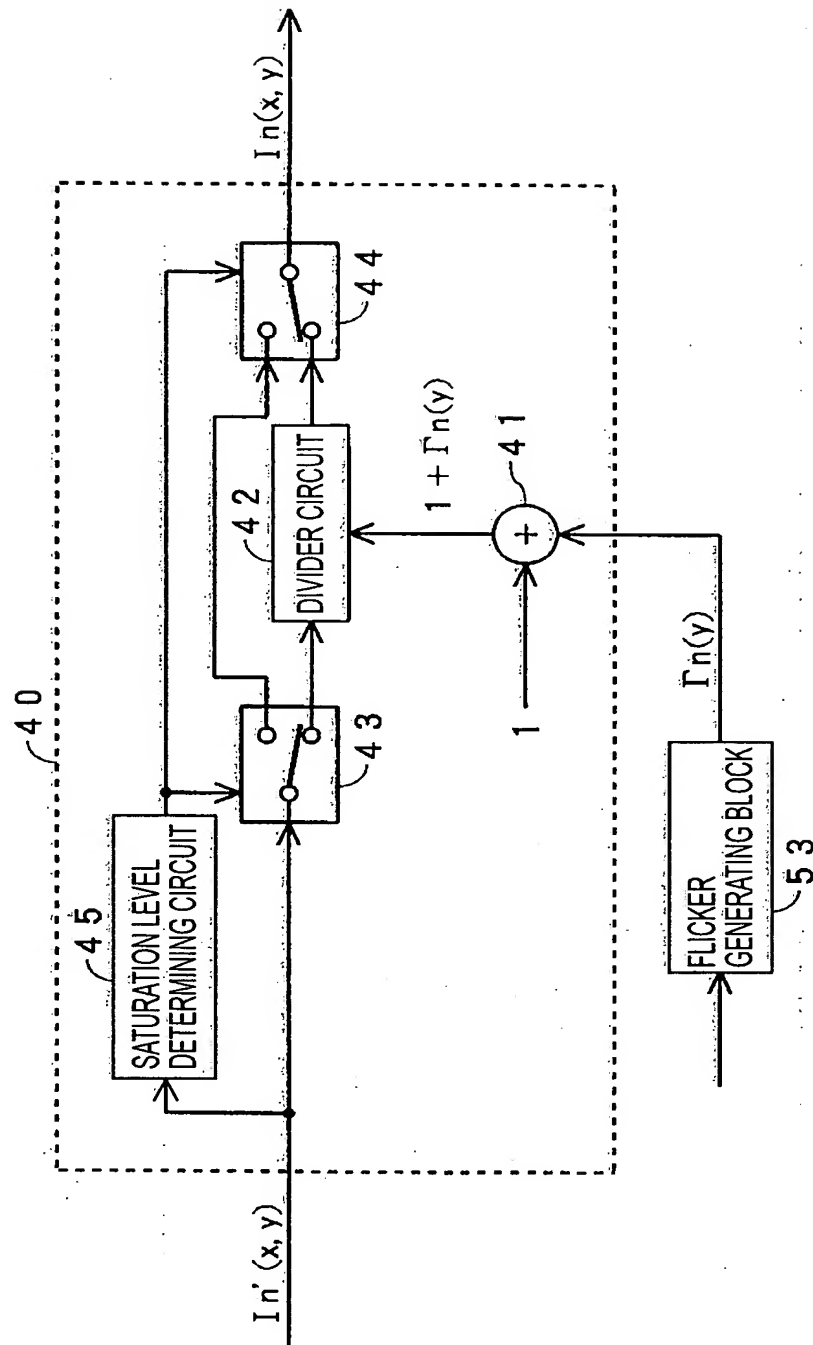


Fig.5

6/30

25

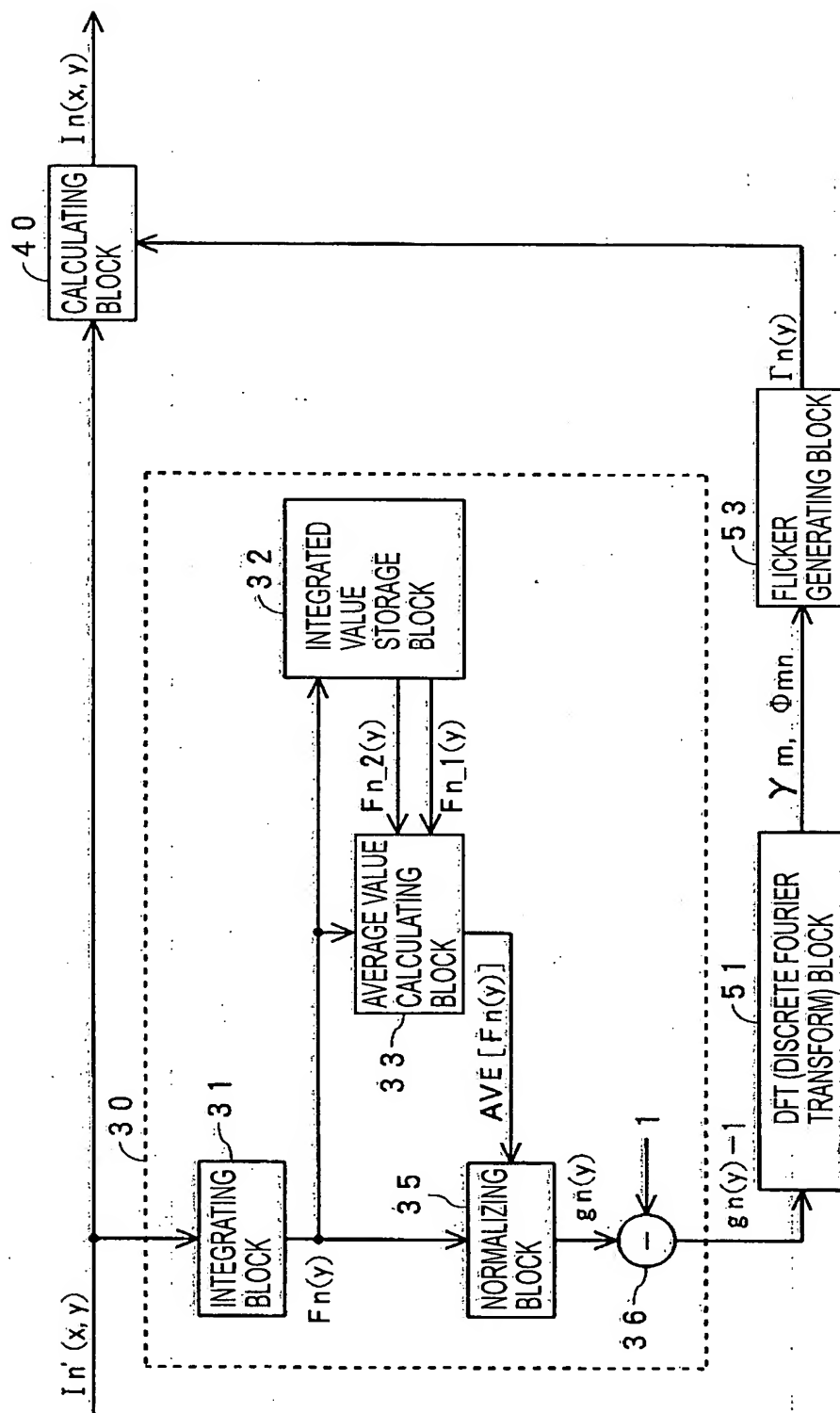


Fig. 6

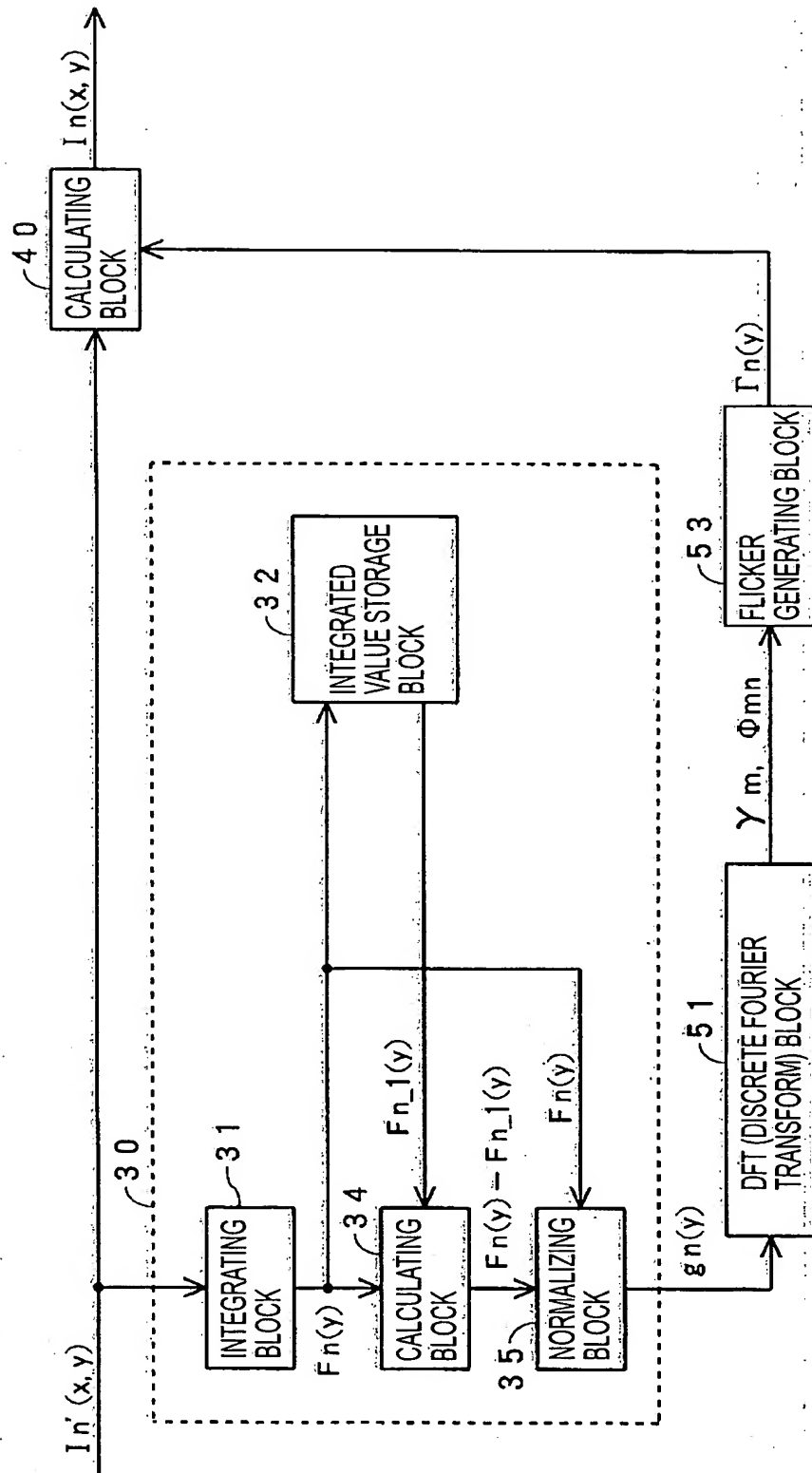
25

Fig. 7

8/30

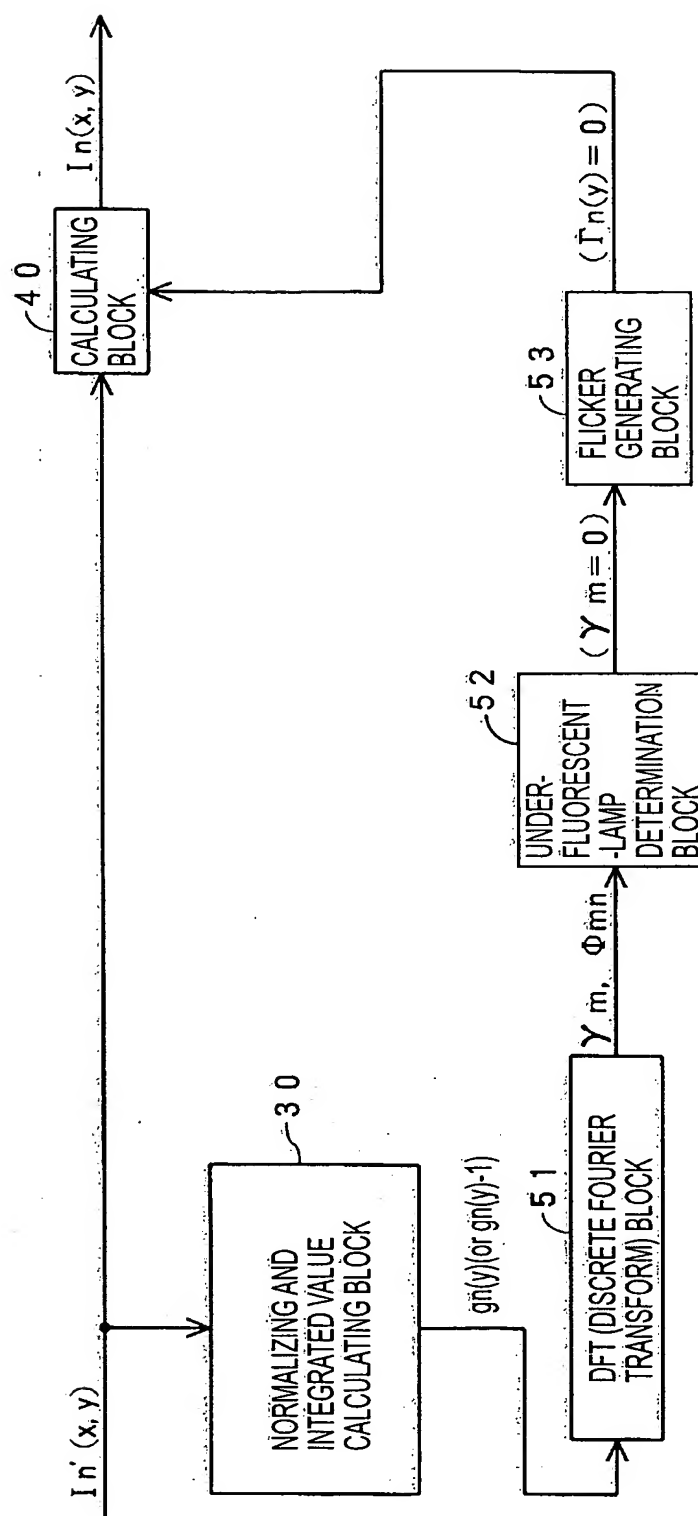
25

Fig.8

9/30

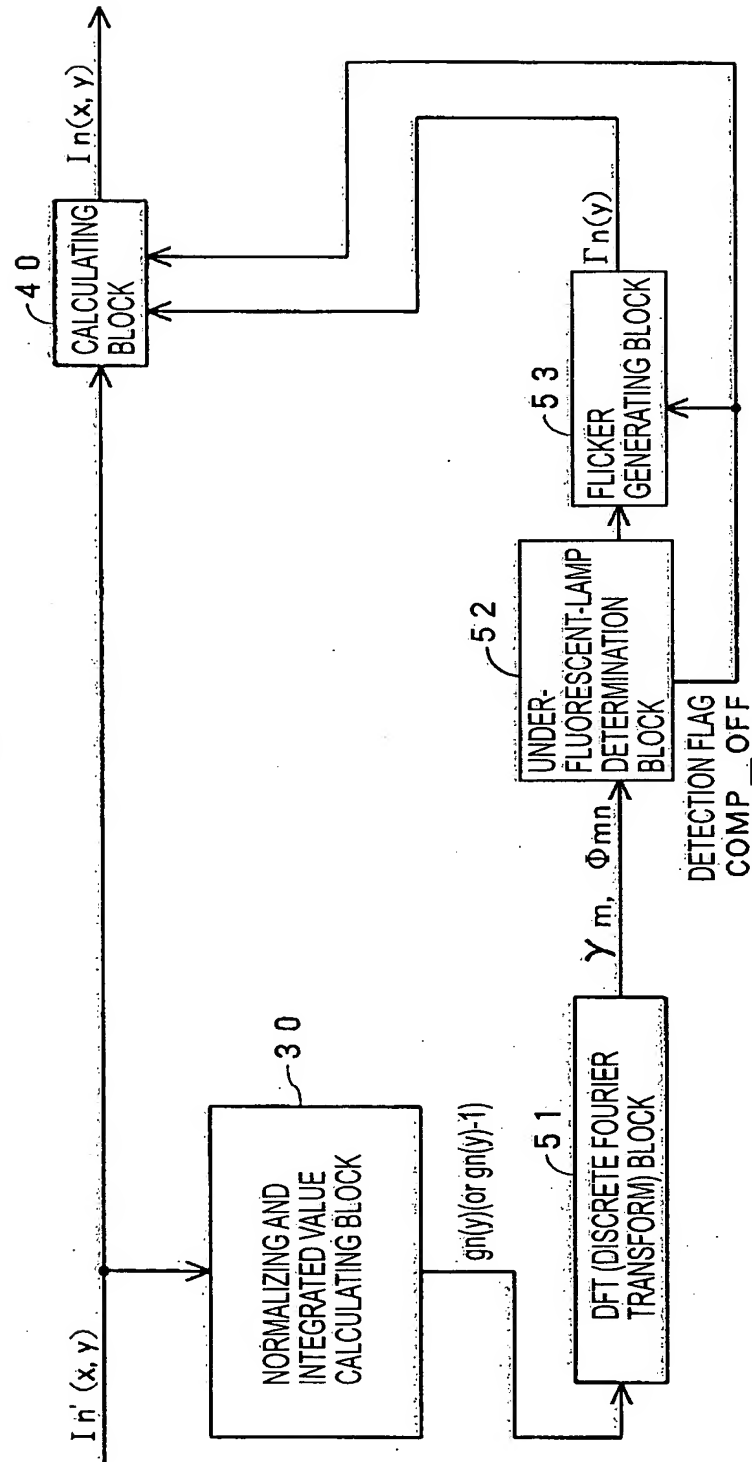
25

Fig.9

10/30

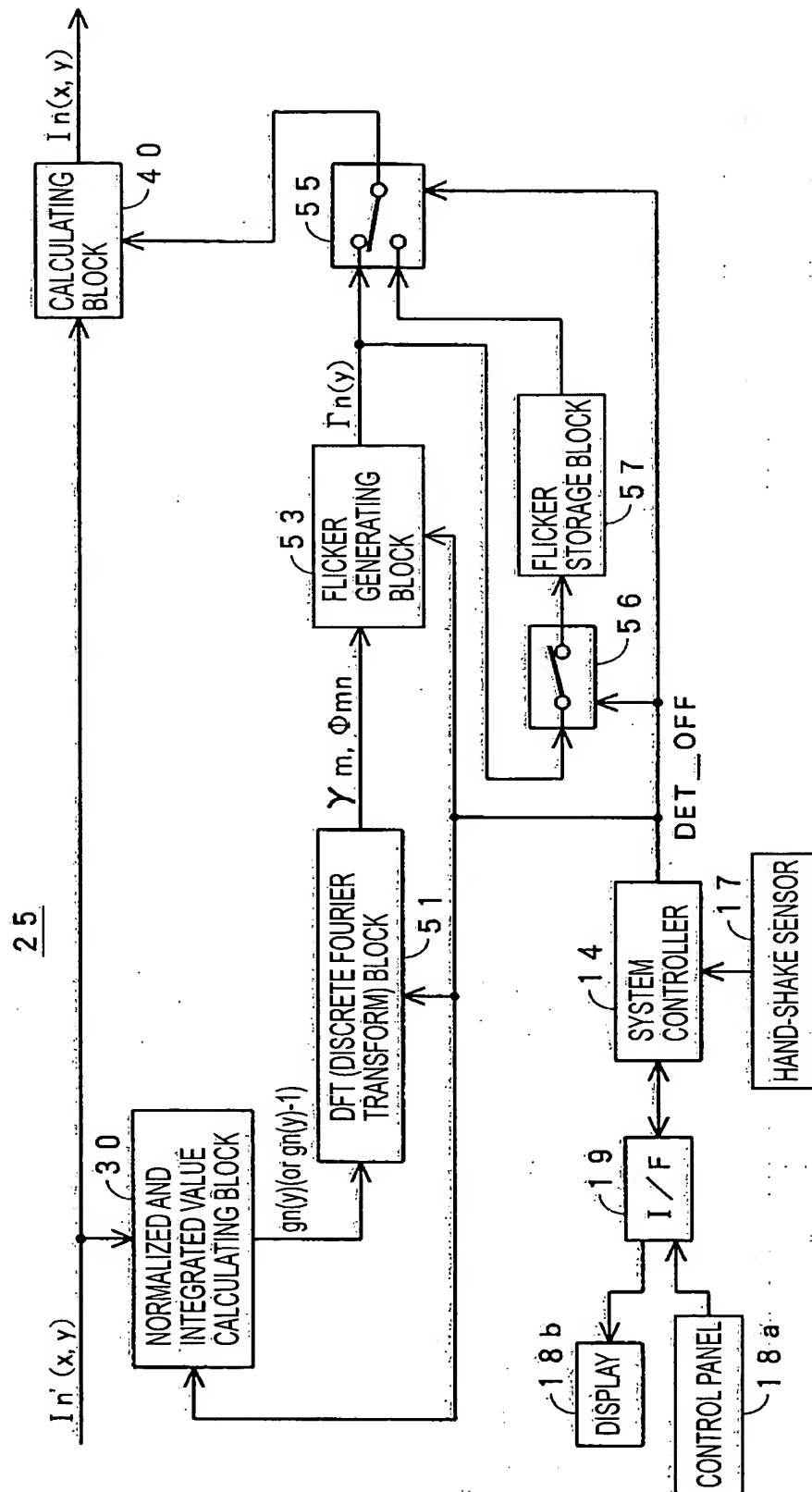


Fig.10

11/30

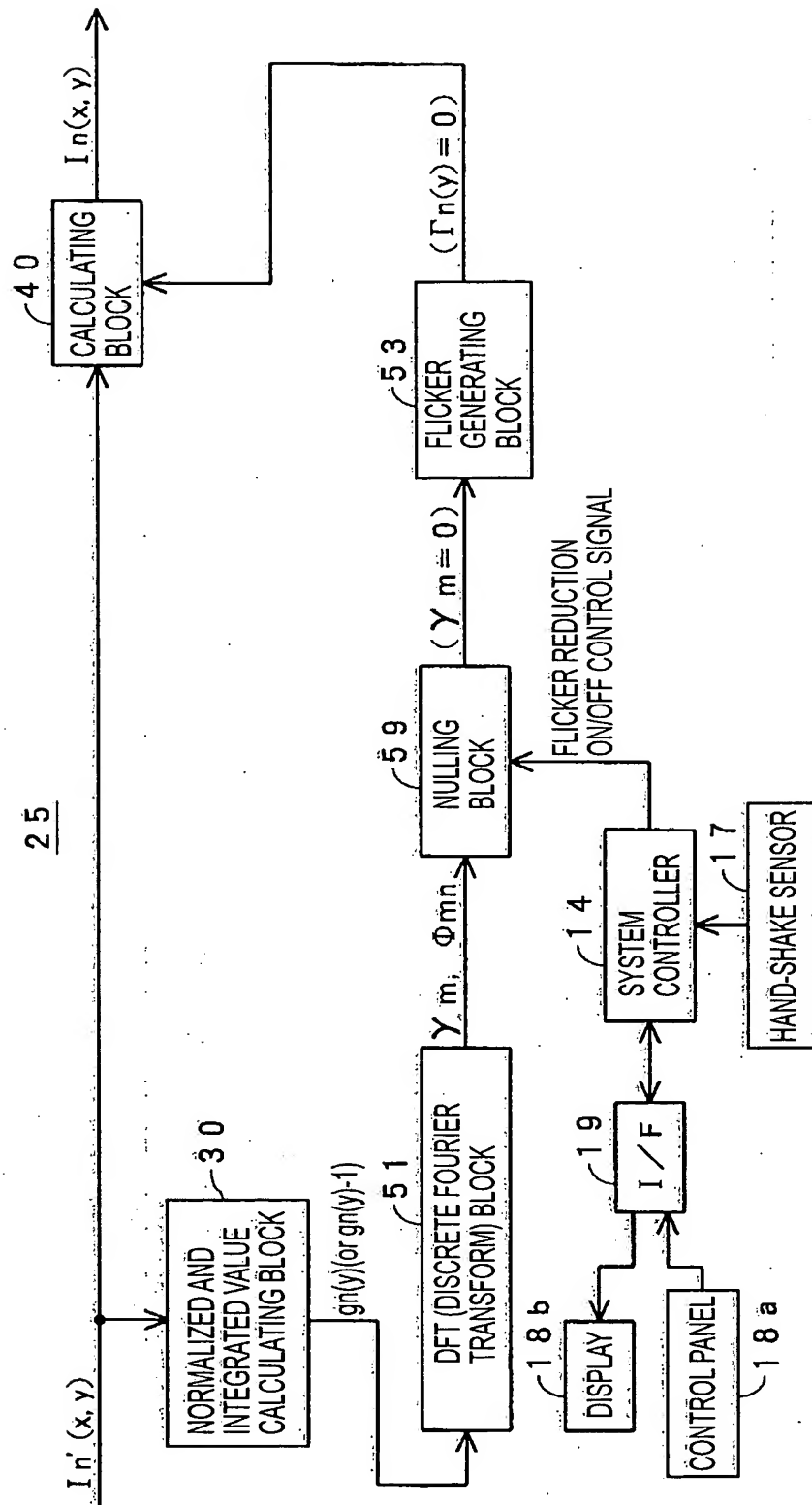


Fig. 11

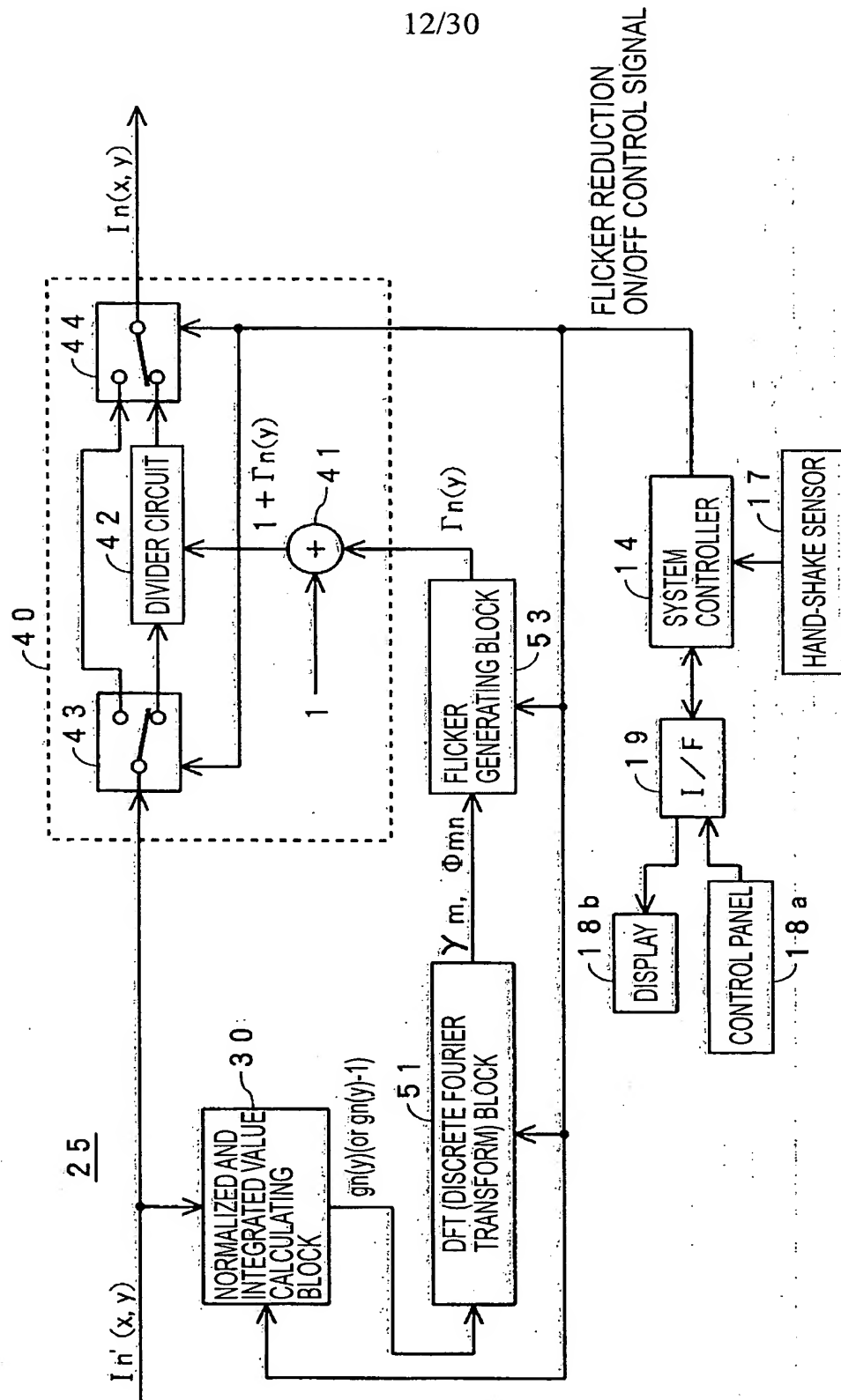


Fig. 12

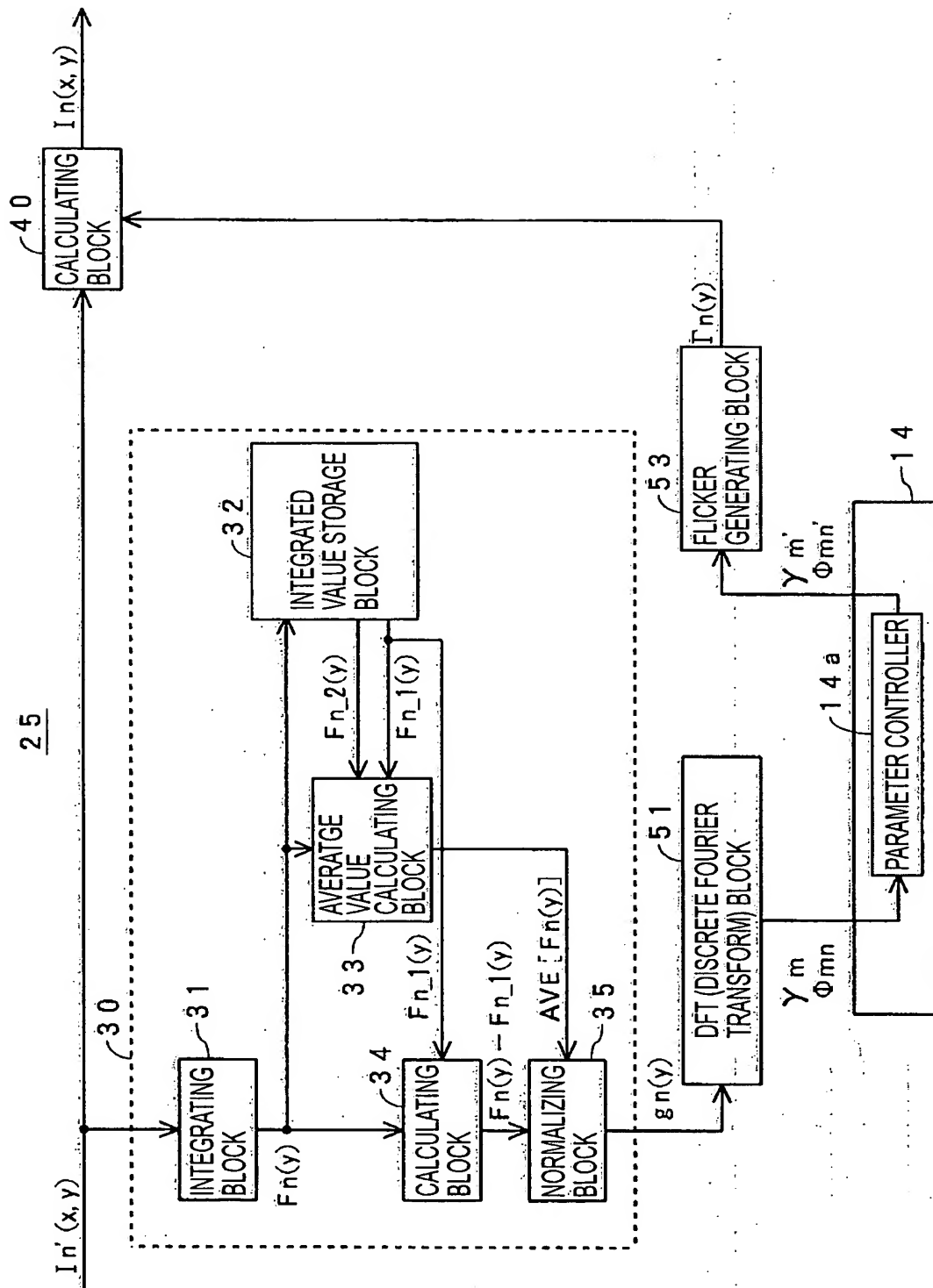


Fig. 13

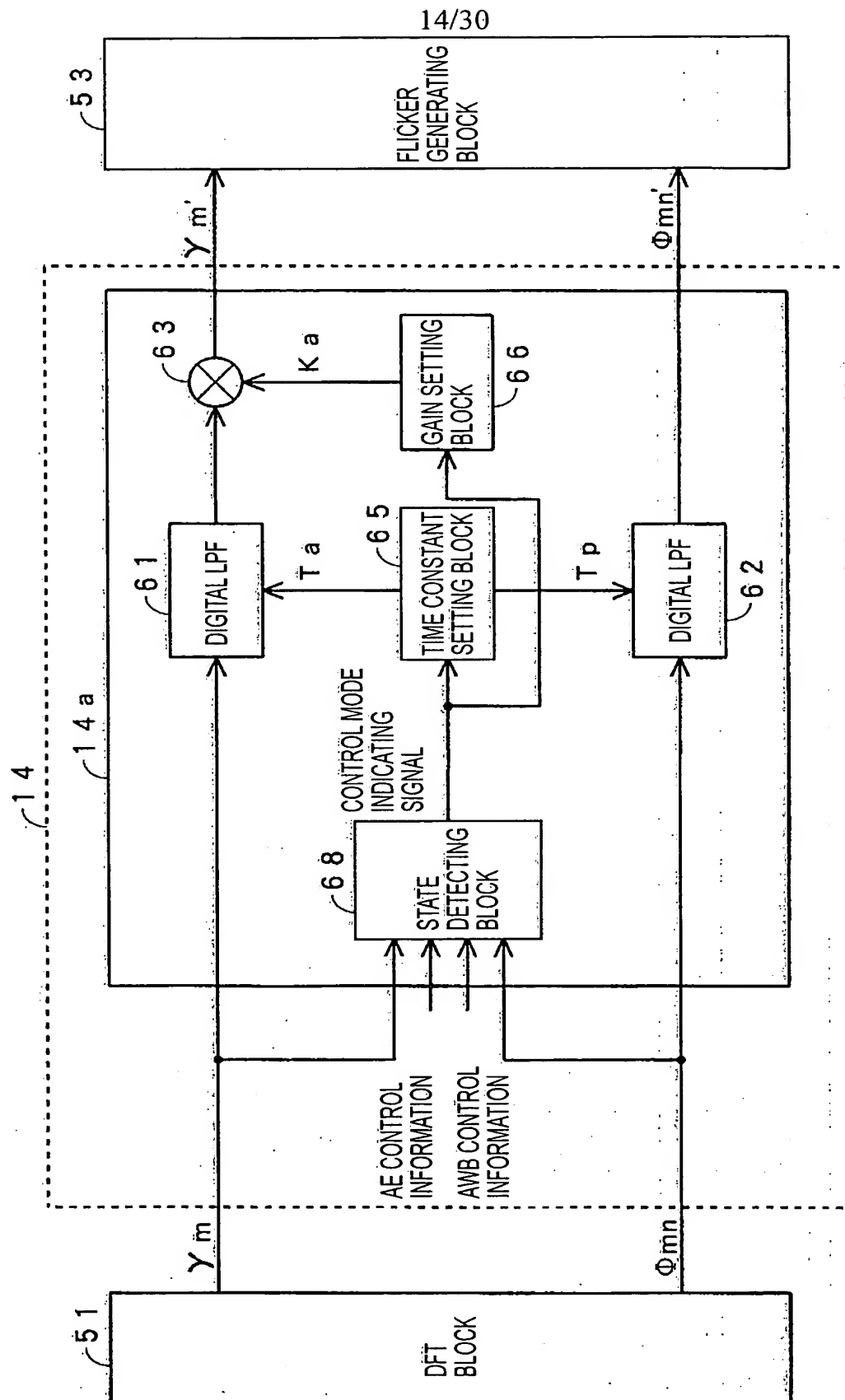


Fig.14

S03P1324

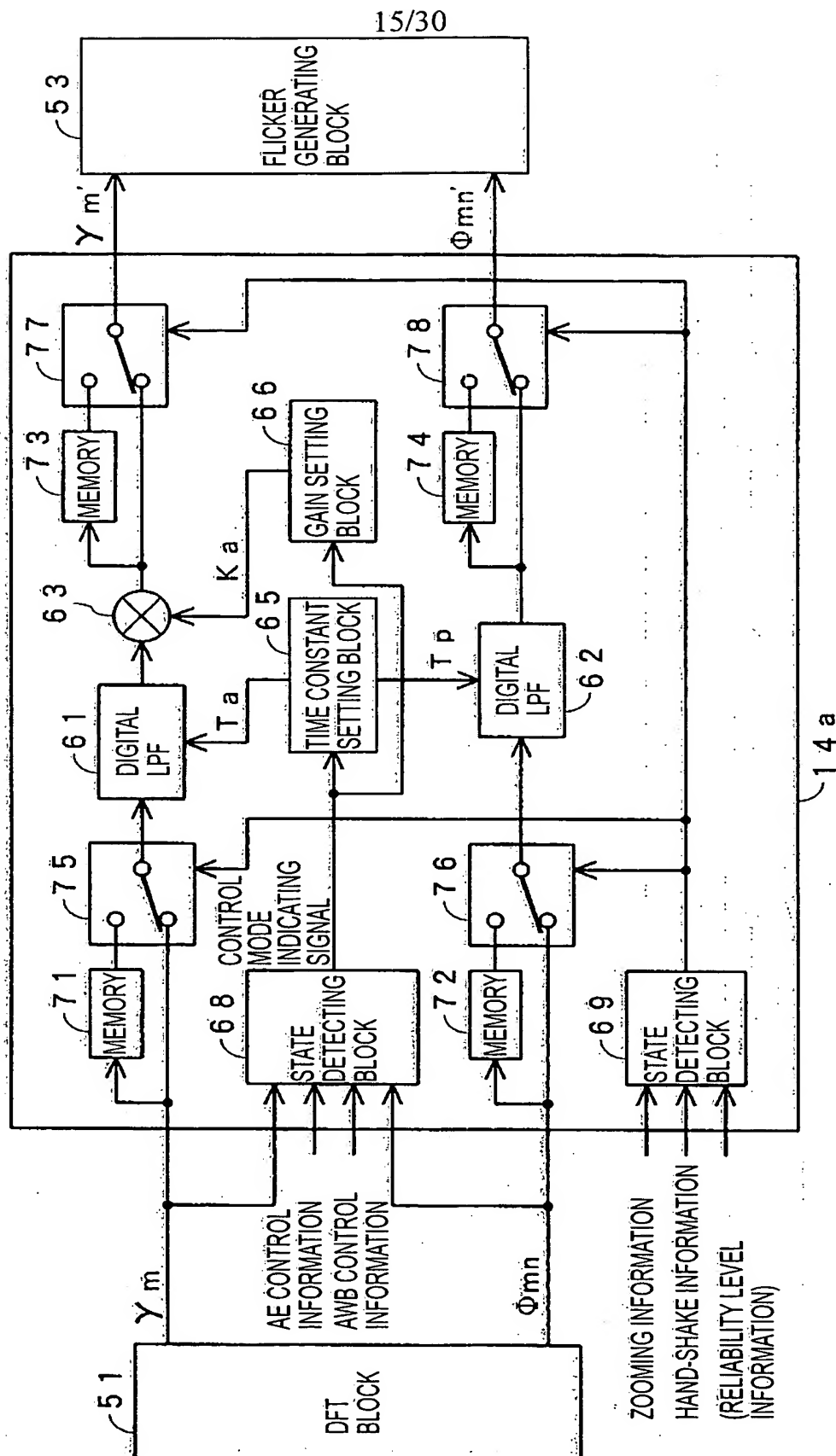


Fig.15

STATE	DETERMINATION CRITERIA	CONTROL MODE
STABLE STATE UNDER LIGHT OF FLUORESCENT LAMP (REGULAR FLICKER)	<p>• THROUGHOUT A PLURALITY OF PAST FIELDS</p> <p>γ_m : GENERALLY CONSTANT</p> <p>ϕ_{mn} : GENERALLY CONSTANT EVERY CONSTANT NUMBER OF PERIODS</p> <p>AE CONTROL : SCREEN LIGHTNESS VARYING EVERY INFORMATION CONSTANT NUMBER OF PERIODS</p> <p>AWB CONTROL : DETERMINED ALMOST AS BEING UNDER INFORMATION "LIGHT OF FLUORESCENT LAMP"</p>	MODE A
STABLE STATE UNDER LIGHT OF NON-FLUORESCENT LAMP (FLICKERLESS)	<p>• THROUGHOUT A PLURALITY OF PAST FIELDS</p> <p>γ_m : RANDOMLY VARYING IN THE VICINITY OF ZERO (NOISE COMPONENT ONLY)</p> <p>ϕ_{mn} : RANDOMLY VARYING</p> <p>AE CONTROL : NO PERIODICITY IN SCREEN LIGHTNESS INFORMATION</p> <p>AWB CONTROL : DETERMINED ALMOST AS BEING UNDER INFORMATION "LIGHT OF NON-FLUORESCENT LAMP"</p>	MODE B

Fig.16

17/30

Fig.17A

$$I_n'(x,y) = [1 + \Gamma_n(y)] * I_n(x,y) \quad \dots (1)$$

WHERE

$$\begin{aligned} \Gamma_n(y) &= \sum_{m=1}^{\infty} \gamma_m * \cos[m * (2\pi / \lambda_o) * y + \Phi_{mn}] \\ &= \sum_{m=1}^{\infty} \gamma_m * \cos(m * \omega_o * y + \Phi_{mn}) \quad \dots (2) \end{aligned}$$

$$\Delta \Phi_{mn} = (-2\pi / 3) * m \quad \dots (3)$$

Fig.17B

$$\begin{aligned} F_n(y) &= \sum_x I_n'(x,y) = \sum_x \{[1 + \Gamma_n(y)] * I_n(x,y)\} \\ &= \sum_x I_n(x,y) + \Gamma_n(y) \sum_x I_n(x,y) \\ &= \alpha_n(y) + \alpha_n(y) * \Gamma_n(y) \quad \dots (4) \end{aligned}$$

WHERE

$$\alpha_n(y) = \sum_x I_n(x,y) \quad \dots (5)$$

Fig.18A

$$\begin{aligned}
 \Lambda V E [F n(y)] &= (1/3) \sum_{k=0}^2 F n_{-k}(y) \\
 &= (1/3) \left\{ \sum_{k=0}^2 \alpha_{n_{-k}}(y) + \alpha_{n_{-k}}(y) * \Gamma_{n_{-k}}(y) \right\} \\
 &= (1/3) \sum_{k=0}^2 \alpha_{n_{-k}}(y) + (1/3) \sum_{k=0}^2 \alpha_{n_{-k}}(y) * \Gamma_{n_{-k}}(y) \\
 &= \alpha_{n(y)} + (1/3) * \alpha_{n(y)} \sum_{k=0}^2 \Gamma_{n_{-k}}(y) \\
 &= \alpha_{n(y)} \quad \dots (6)
 \end{aligned}$$

WHERE

$$\alpha_{n(y)} \cong \alpha_{n_{-1}(y)} \cong \alpha_{n_{-2}(y)} \quad \dots (7)$$

Fig.18B

$$\begin{aligned}
 F n(y) - F n_{-1}(y) &= \{ \alpha_{n(y)} + \alpha_{n(y)} * \Gamma_{n(y)} \} - \{ \alpha_{n_{-1}(y)} + \alpha_{n_{-1}(y)} * \Gamma_{n_{-1}(y)} \} \\
 &= \alpha_{n(y)} * \{ \Gamma_{n(y)} - \Gamma_{n_{-1}(y)} \} \\
 &= \alpha_{n(y)} \sum_{m=1}^{\infty} \gamma_m * \{ \cos(m * \omega_o * y + \Phi_{mn}) \\
 &\quad - \cos(m * \omega_o * y + \Phi_{mn_{-1}}) \} \\
 &\quad \dots (8)
 \end{aligned}$$

19/30

Fig.19A

$$\begin{aligned}
 g_n(y) &= \{F_n(y) - F_{n-1}(y)\} / AVE[F_n(y)] \\
 &= \sum_{m=1}^{\infty} \gamma_m * \{\cos(m * \omega_o * y + \Phi_{mn}) \\
 &\quad - \cos(m * \omega_o * y + \Phi_{mn-1})\} \\
 &= \sum_{m=1}^{\infty} (-2) \gamma_m \{\sin[m * \omega_o * y + (\Phi_{mn} + \Phi_{mn-1})/2] \\
 &\quad * \sin[(\Phi_{mn} - \Phi_{mn-1})/2]\} \\
 &\quad \dots (9)
 \end{aligned}$$

Fig.19B

$$\begin{aligned}
 g_n(y) &= \sum_{m=1}^{\infty} (-2) \gamma_m * \sin(m * \omega_o * y + \Phi_{mn} + m * \pi/3) \\
 &\quad * \sin(-m * \pi/3) \\
 &= \sum_{m=1}^{\infty} 2 * \gamma_m * \cos(m * \omega_o * y + \Phi_{mn} + m * \pi/3 - \pi/2) \\
 &\quad * \sin(m * \pi/3) \\
 &= \sum_{m=1}^{\infty} 2 * \gamma_m * \sin(m * \pi/3) \\
 &\quad * \cos(m * \omega_o * y + \Phi_{mn} + m * \pi/3 - \pi/2) \\
 &= \sum_{m=1}^{\infty} |A_m| * \cos(m * \omega_o * y + \theta_m) \quad \dots (10)
 \end{aligned}$$

WHERE

$$|A_m| = 2 * \gamma_m * \sin(m * \pi/3) \quad \dots (11a)$$

$$\theta_m = \Phi_{mn} + m * \pi/3 - \pi/2 \quad \dots (11b)$$

Fig.20A

$$\gamma_m = |\Lambda_m| / [2 * \sin(m * \pi / 3)] \quad \dots (12a)$$

$$\Phi_{mn} = \theta_m - m * \pi / 3 + \pi / 2 \quad \dots (12b)$$

Fig.20B

$$DFT[g_n(y)] = G_n(m) = \sum_{i=0}^{L-1} g_n(i) * W^{m*i} \quad \dots (13)$$

WHERE

$$W = \exp[-j * 2 * \pi / L] \quad \dots (14)$$

Fig.20C

$$|\Lambda_m| = 2 * |G_n(m)| / L \quad \dots (15a)$$

$$\theta_m = \tan^{-1} \{ \text{Im}[G_n(m)] / \text{Re}[G_n(m)] \} \quad \dots (15b)$$

WHERE

Im[G_n(m)] :IMAGINARY PARTRe[G_n(m)] :REAL PART

Fig.20D

$$\gamma_m = |G_n(m)| / [L * \sin(m * \pi / 3)] \quad \dots (16a)$$

$$\Phi_{mn} = \tan^{-1} \{ \text{Im}[G_n(m)] / \text{Re}[G_n(m)] \} - m * \pi / 3 + \pi / 2 \quad \dots (16b)$$

Fig.20E

$$I_n(x,y) = I_n'(x,y) / [1 + \Gamma_n(y)] \quad \dots (17)$$

Fig.21A

$$g_n(y) = F_n(y) / AVE[F_n(y)]$$

$$= 1 + \sum_{m=1}^{\infty} \gamma_m * \cos(m * \omega_o * y + \Phi_{mn}) \quad \dots (18)$$

Fig.21B

$$g_n(y) - 1 = \sum_{m=1}^{\infty} \gamma_m * \cos(m * \omega_o * y + \Phi_{mn})$$

$$= \sum_{m=1}^{\infty} |A_m| * \cos(m * \omega_o * y + \theta_m) \quad \dots (19)$$

Fig.21C

$$\gamma_m = 2 * |G_n(m)| / L \quad \dots (20a)$$

$$\Phi_{mn} = \tan^{-1} \{ \text{Im}[G_n(m)] / \text{Re}[G_n(m)] \} \quad \dots (20b)$$

WHERE

$\text{Im}[G_n(m)]$: IMAGINARY PART

$\text{Re}[G_n(m)]$: REAL PART

Fig.22A

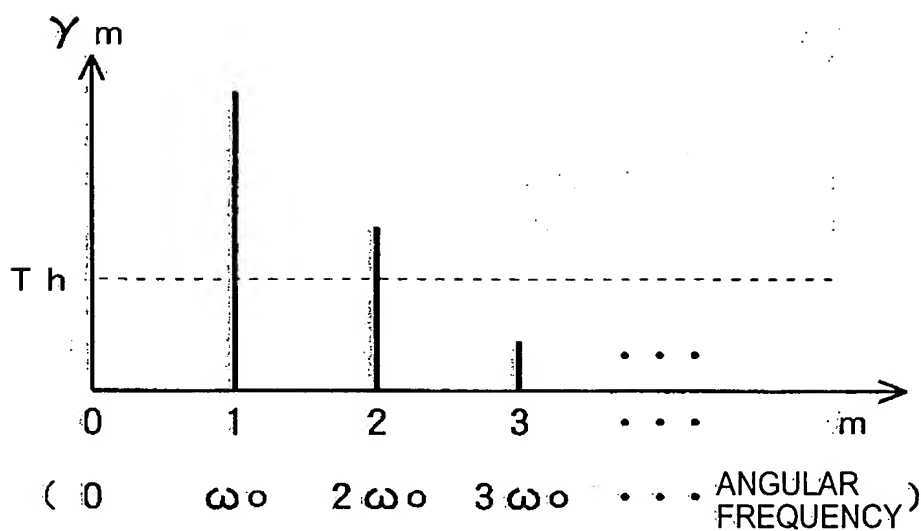
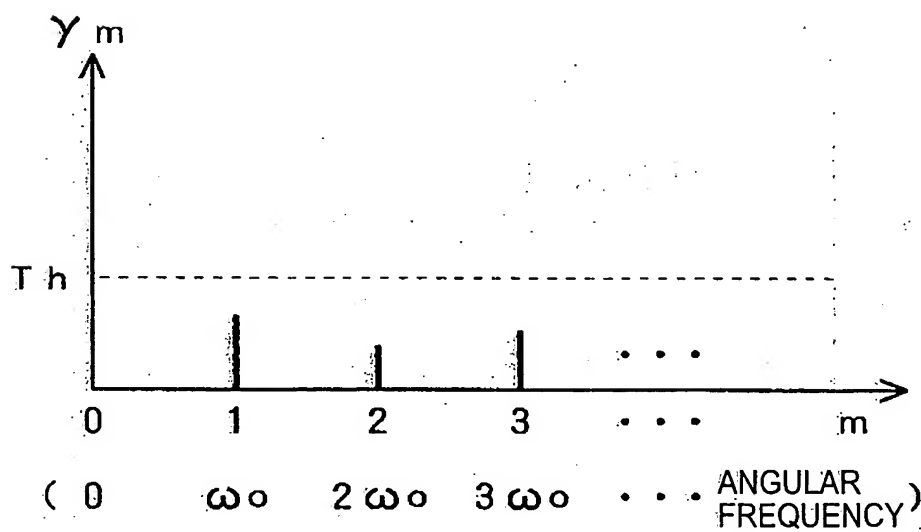


Fig.22B



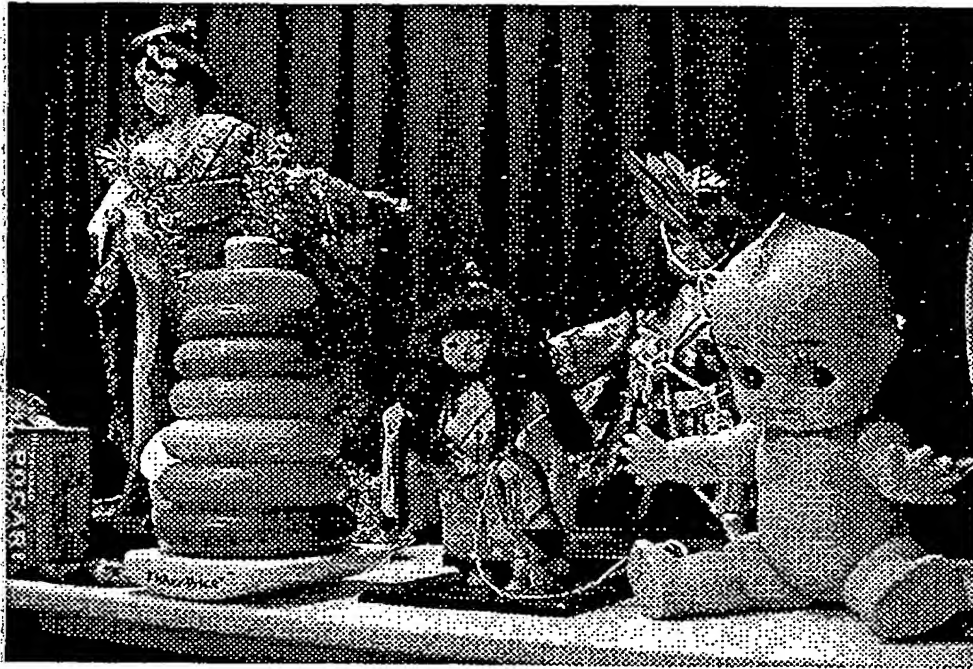


Fig.23

24/30

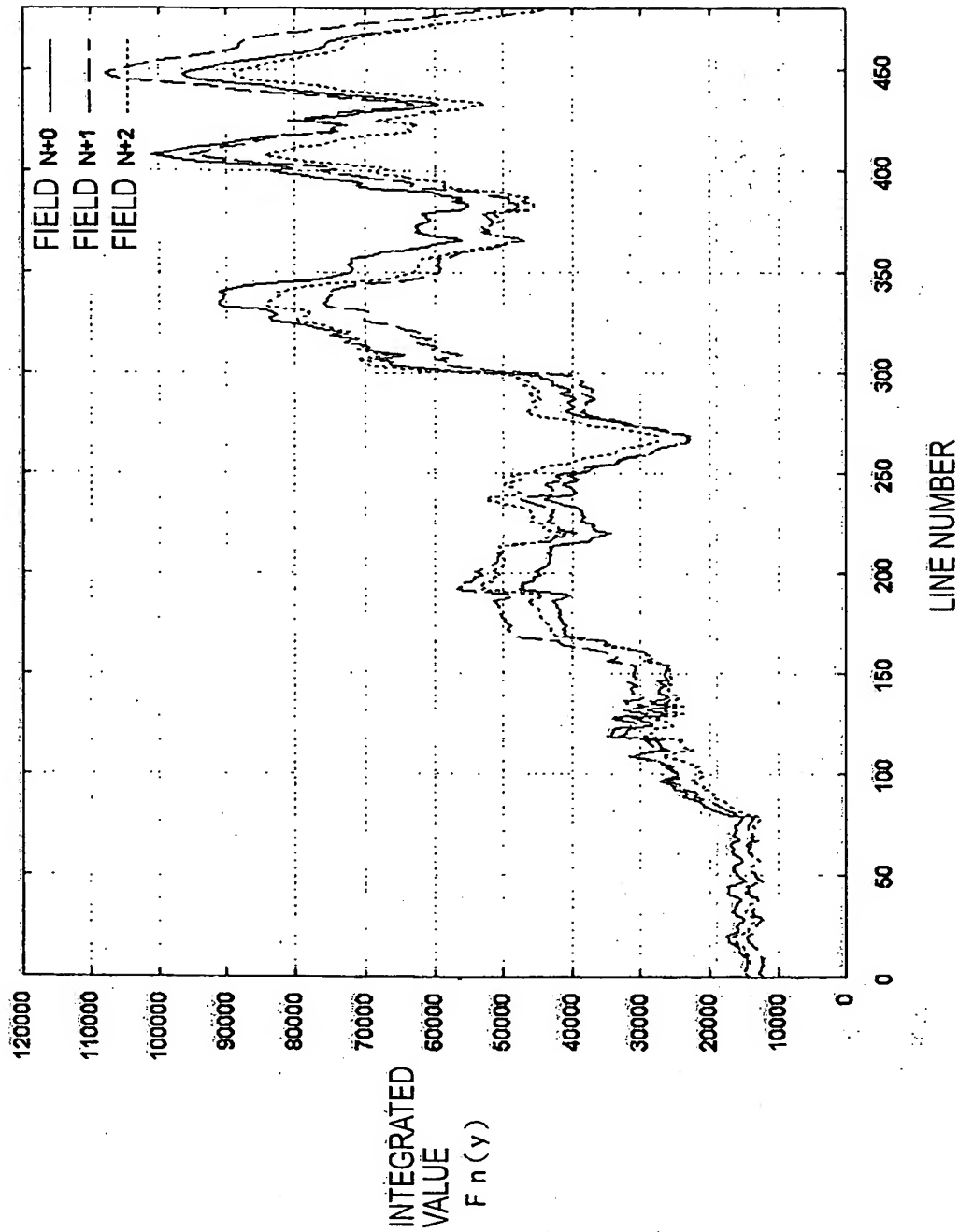


Fig.24

25/30

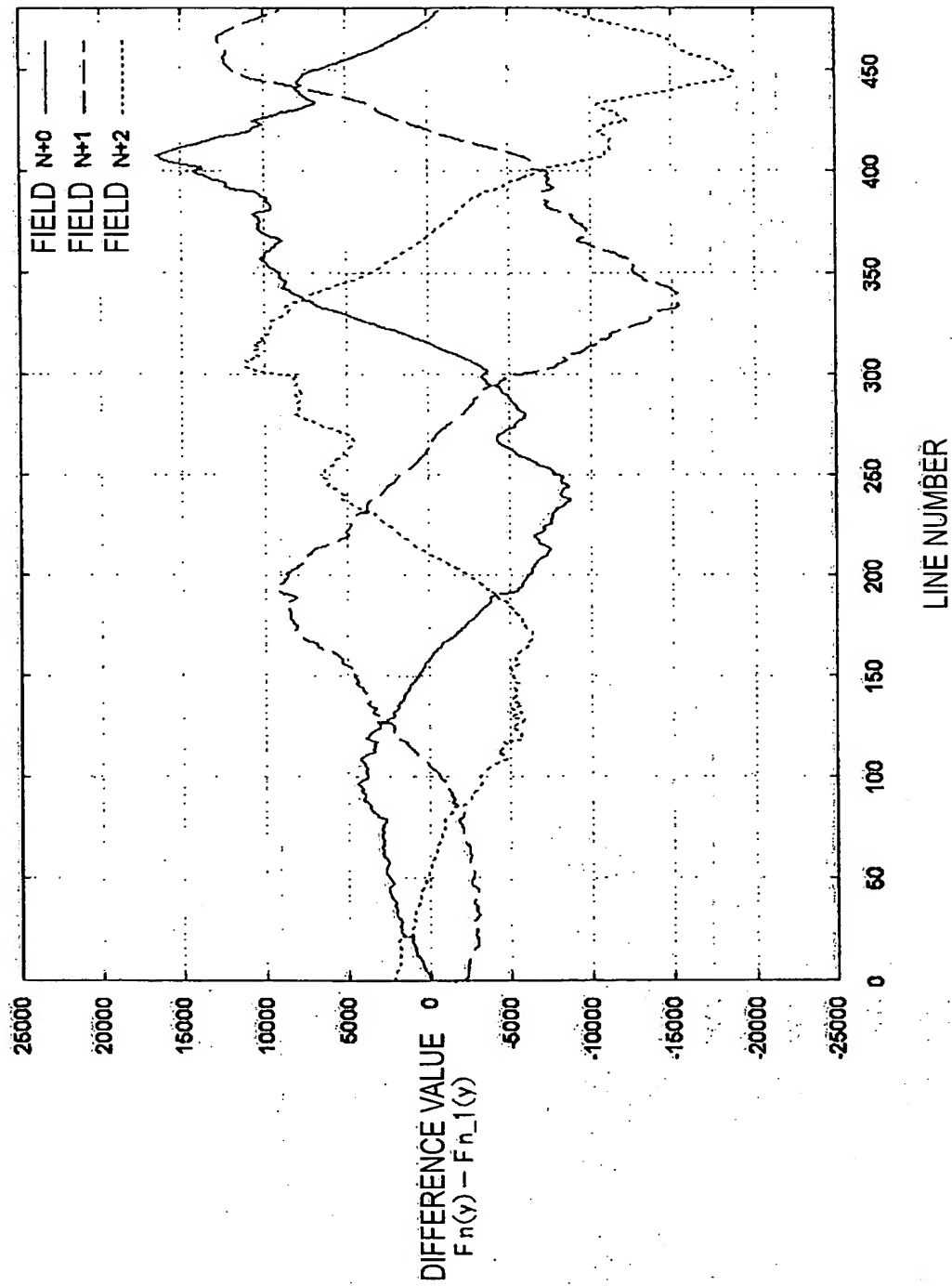


Fig.25

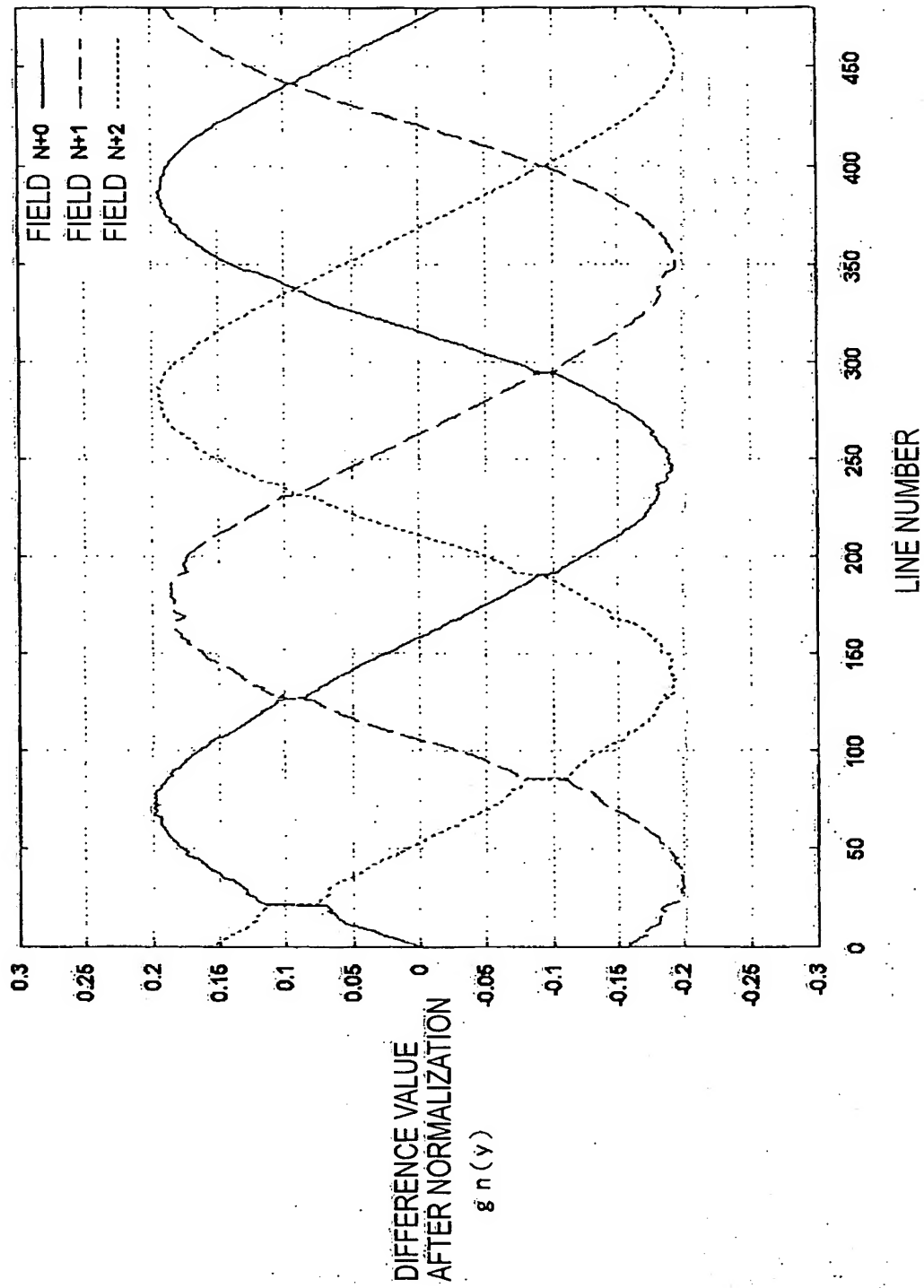


Fig.26

27/30

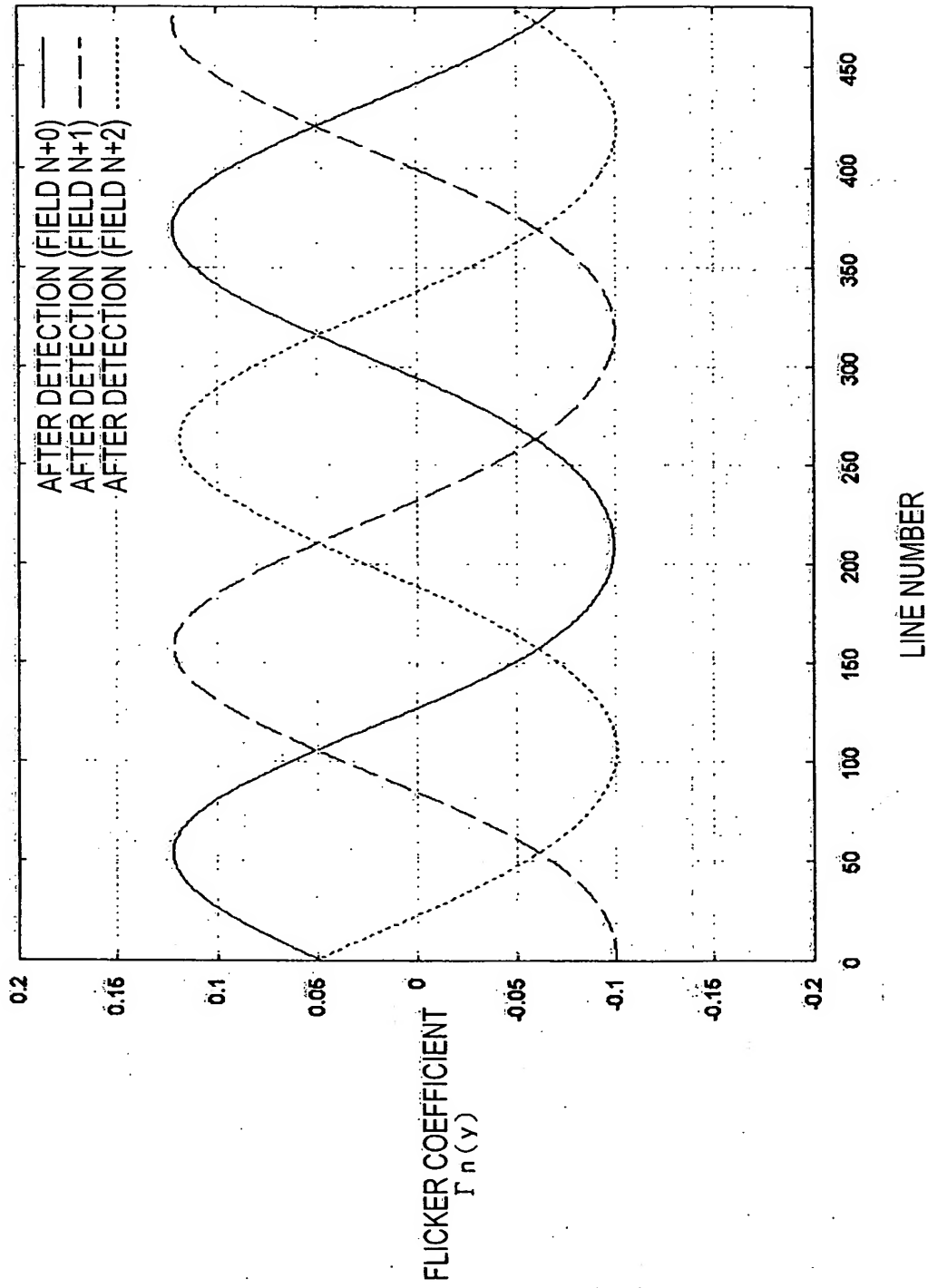


Fig.27

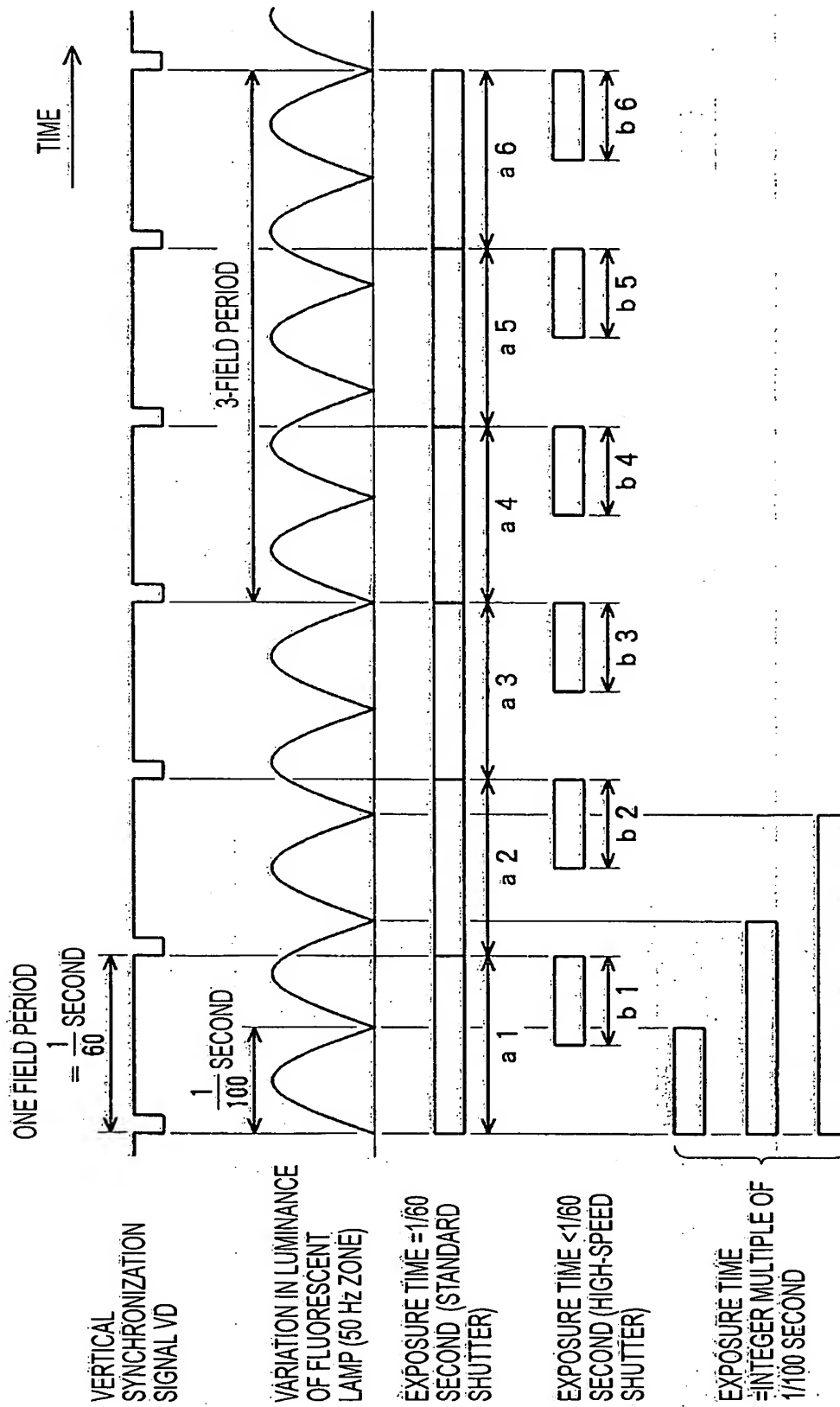


Fig.28

29/30

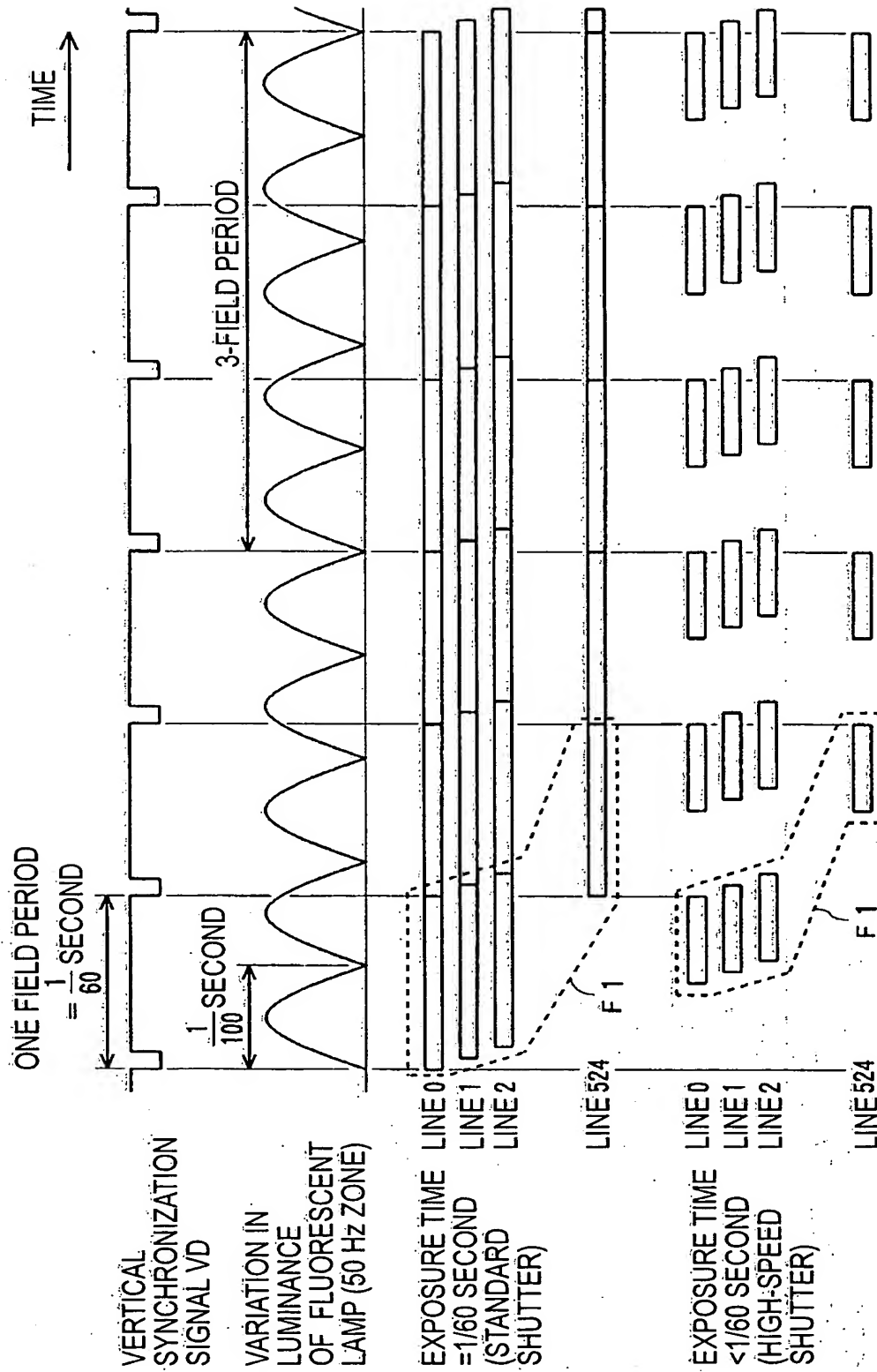


Fig.29

30/30

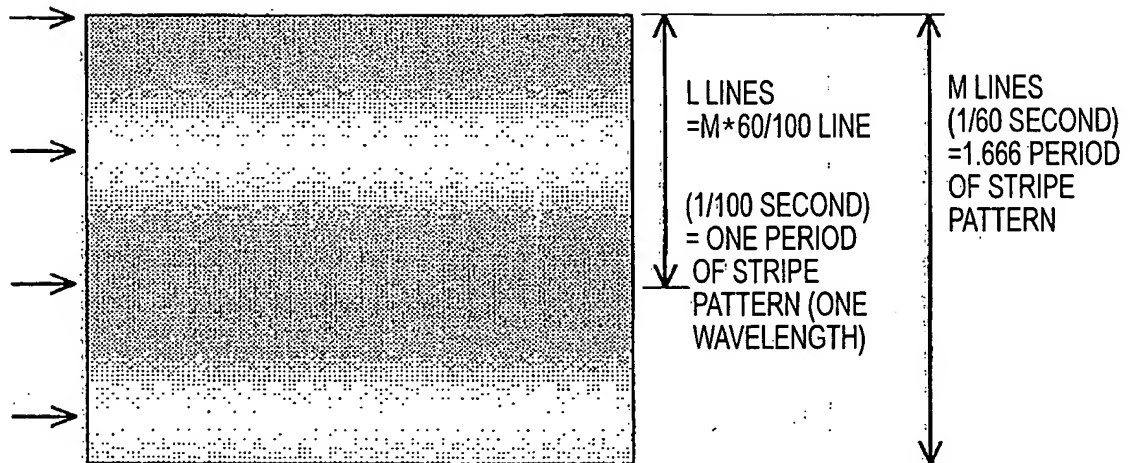


Fig.30

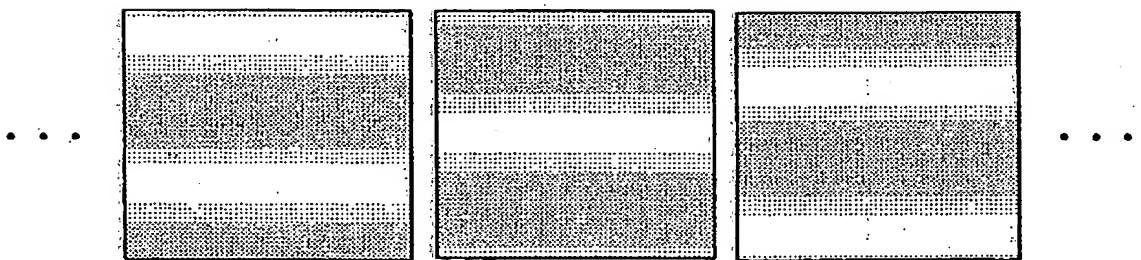


Fig.31